# —Standard Valves—

# VALVE TYPE 3C/I50-A

HIGH FREQUENCY TRIODE.

### SPECIFICATION.

### Cathode.

Thoriated tungsten filament.

Constant voltage type.

### Dimensions.

Maximum overall length  $9\frac{15}{16}''$  (25·2 cm.) Bulb diameter  $2\cdot83''$  (7·2 cm.) Net weight  $0\cdot7$  lbs. (320 gms.)

#### Base.

Large 4-pin bayonet.

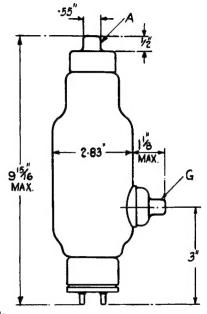
# Constants.

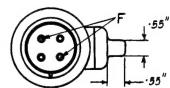
Filament voltage 10 volts
Filament current 3.4 amps.
\*Impedance 3,800 ohms.
\*Amplification factor 18

\*Mutual conductance 4.75 mA. per volt

Grid-anode capacity 7.3  $\mu\mu$ F. Grid-filament capacity 8.6  $\mu\mu$ F. Anode-filament capacity 1.1  $\mu\mu$ F.

\* at Vp = 1,000 volts, Ip = 150 mA.





# LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage2,500 voltsMaximum anode dissipation150 wattsMaximum direct anode current200 mA.Maximum RF grid current10 amps.Maximum frequency for above ratings20 Mc.Maximum anode voltage for frequency of 60 Mc.2,000 volts

W.3C/150-A.1 March 1939

Tentative data

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## TYPICAL OPERATING CONDITIONS.

Class B Audio Frequency Amplifier and Modulator for Balanced 2-valve circuit				
Direct anode voltage	2,000	2,500	2,500 volts	
Grid bias	100	-130	-130 volts	
Load resistance, anode to anode	11,200	16,000	16,000 ohm	
Anode current per valve—zero signal	30	30	30 mA.	
max. signal	190	160	180 mA.	
Peak AF grid to grid voltage	420	410	460 volts	
Max. signal driving power (approx.)	9	2.5	8 watt	
Peak AF grid to grid voltage Max. signal driving power (approx.) Power output (approx.)	500	500	600 watt	

Class B Telephony. RF. Power	Amplifier	
Direct anode voltage Grid blas Peak RF grid voltage Direct anode current Direct grid current (approx.) Anode dissipation Approx. driving power at peak of modulation Power output (approx.)	2,000 —110 125 110 0·5 140 6 80	2,500 volts —140 volts 150 volts 90 mA. 0 mA. 145 watts 4 watts 80 watts

Class C Telephony—Subject to	mode modulation	
Direct anode voltage	1,750	2,000 volts
Grid bias-total	<b>—300</b>	—350 volts
fixed	<b>—75</b>	—100 volts
grid resistor	7,500	12,500 ohms
Peak RF grid voltage	475	500 volts
Direct anode current	200	160 mA.
Anode input	350	320 watts
Direct grid current (approx.)	30	20 mA.
Anode dissipation	80	70 watts
Driving power (approx.)	14	9 watts
Power output (approx.)	270	250 watts
Max. frequency limit for above operation	30	30 Mc.

# —Standard Valves—

Class C Telegraphy—Unmodulated			
Direct anode voltage Grid bias Peak RF grid voltage Direct anode current Direct grid current (approx.) Anode dissipation Driving power (approx.) Output power (approx.)	2,000 —250 410 200 23 100 9	2,500 volts 300 volts 455 volts 200 mA. 18 mA. 120 watts 8 watts 380 watts	

